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ABSTRACT

This paper describes a pilot project to train rural native American paraprofessional personnel to deliver routine speech-language services to children under the overall supervision of a certified professional. The program had three components: on-site visits, desk-top conferencing, and distance training. The program was implemented at one reservation school in Arizona with a caseload of 38 students and one trainee. Faculty and graduate students initially visited on-site to evaluate students' communicative abilities, to develop and review treatment programs, and to confer with parents and staff. Desk-top conferencing allowed the paraprofessional trainee to communicate problems and concerns about students as needed. Program evaluation involved trainee responses to objective test questions via computer interface, trainee completion of a questionnaire regarding her impressions, and responses of other school faculty to a questionnaire regarding program quality. Some unexpected problems were encountered in project implementation including climatic problems (daily monsoon thunderstorms which threatened computer operations and led to suspension of the program) and demographic problems (lack of appropriate electrical connections and unfamiliarity with technology.) (DB)

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THE POWER OF THE INTERNET: TRAINING SPEECH PATHOLOGY ASSISTANTS ON INDIAN RESERVATIONS

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INTRODUCTION

This presentation describes the problems encountered during a pilot project to train rural Native American paraprofessional personnel on an Apache reservations in Arizona. The project employed multimodality distance education and computer applications to solve the problem of access to training in a remote location, and ease the personnel shortage at the school sites.

The project was initiated because of the shortage of qualified personnel to deliver Speech-Language Pathology services in schools in Arizona. The shortage is particularly noticeable on Indian Reservations. Among the several difficulties involved in staffing the reservation schools, the most troublesome are small caseloads and great distances involved in providing professional services.

The purpose of this program was to create a pilot project to attract external funding of a larger statewide program for Speech-Language Pathology paraprofessional training. The investigators planned to provide demonstration data to support expansion of the project from one reservation school to approximately ten.

It is sometimes not financially practical for school systems with very small caseloads to hire a full-time staff member to provide speech and language services. Thus, a single clinician is assigned to service caseloads in several schools. Traditionally, paraprofessional staff carries out the daily treatment activities when the certified clinician is off campus.

Distances from major urban centers to reservation schools may range from 150 to 300 miles, one way. The schools are in remote locations populated by bucolic folk and culturally unique citizens. Most speech-language pathology and audiology graduates seek employment in more urban environments with larger budgets and fewer problems adapting services to the language and culture of native Americans.

The advantages of having local staff who are at home in the schools' locations include knowledge of the population and cultural ways. These staff members know the community and often attended the school

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at which they work. Administrators can feel comfortable in knowing native staff members will be relatively stable employees.

Another advantage of training local native staff is language fluency. There are few speakers of Native American languages who are also certified Speech-Language Pathologists. Thus, the presence of trained native speakers is of great benefit to the children on a caseload and to the attending clinician.

The American Speech-Language-Hearing Association recognized the need. Paraprofessional training addresses the shortage of professionals and relieves the lag between current and required training of school aides (Moore, 1996). Some daily exercises, drills and other objective-oriented activities do not require supervision by staff with the graduate level of training. Paraprofessional staff members can carry out the quotidian requirements of a habilitation program established and supervised by the certified professional. Ethical and legal exigencies demand site visits and regular contact by a certified professional case manager in the discipline area.

Staff Development Problems

A major disadvantage of staffing schools from native populations lies in the lack of on site training programs. One time-tried answer is the "periodic workshop." Workshops, however, are one-time affairs, with little provision for follow-up, continuing education and opportunities for professional growth.

Advances in communication and distance learning allow initial training opportunities as well as follow-up over great distances. Computer-mediated technology can provide education and personal contact by graphic, voice and video modalities training opportunities for rural school personnel. These did not exist a few years ago. The internet will allow support for any number of paraprofessionals who, in turn, might provide drill, screening, data collection and other routine activity to twenty children or more apiece.

The need for the on-site presence of a certified professional Speech-Language Pathologist may be reduced to that required for evaluations, reevaluations, parent conferences and administration with no loss in quality of service. Direct contact treatment sessions between the professional and the student may be reserved for complex cases or when modification of an existing program is necessary.

PLAN OF THE PROJECT

Cibecue School, a small program on the White Mountain Apache Reservation in central Arizona, participated in the pilot project. There was a caseload of 38 active students, a short list of pending evaluations and a longer screening list. The school had one individual currently interested in participating in the training program for the position of speech therapy assistant (STA), with another trainee considering the project.

The training program had three components: on site visits, desk top conferencing and distance training. Faculty, certified by the American Speech-Language and Hearing Association, maintained the quality of the pilot program.

Faculty and graduate students from the Department of Speech Pathology visited on-site to evaluate students' communicative abilities, develop and review treatment programs (Individualized Educational Programs), and confer with parents and staff. Graduate students from the department participated in

evaluations and screening, as indicated, as part of their clinical training.

Desk-top conferencing allowed paraprofessional trainees to communicate problems and concerns about students in their programs on a daily basis or as needed. Conferencing took place between the trainee and the professional faculty staff or a graduate assistant. Staff from the University Office of Instructional Development also visited to support the distance education technology. The training program consisted of two hours of interactive computer learning activity weekly augmented by a printed paraprofessional training program work in progress, authored by one of the investigators. This program provided training in phonetics, speech articulation, audiological screening, language development, stuttering, and behavior modification. The trainee received a certificate as a speech therapy assistant (STA) following completion of the course.

Three sources of data served as means of evaluating the project's success. Trainees responded to objective test questions provided in the training program which was delivered via computer interface. Trainees also completed a questionnaire to report their impressions of the project. Finally, selected Cibecue school faculty (principal, director of special education, and a classroom teacher) responded to a questionnaire regarding the program quality.

This program was designed to be expanded to include higher training levels as indicated and to include additional training sites. The projectors intended to develop a format whereby rural reservation communities could participate in the statewide program as needed.

UNEXPECTED PROBLEMS

Several problems arose in the implementation of the project. The sources of these problems were climactic, cultural and demographic. Investigators will plan future development around such circumstances.

Climactic Problems

In mid June through July, the weather southwest of the United States is marked by daily intense thunderstorms: the monsoons. The monsoons may come early or late, but, once they arrive, they continue daily until the season is over.

Electromagnetic induction accompanying the monsoon lightning strikes wreaks havoc with microwave telephone transmission and causes damaging voltage surges in the alternating house current of buildings nearby. Both are sources of disaster for computer operations, and the sure way to protect expensive equipment is to shut down the hardware. The advent of the monsoon season meant suspension of the program.

Our trainee combined familiarity with her home's climate with her creativity. Without mentioning it, she printed the first ten Internet tests in advance. When her suspicions were realized, she had simply to complete the tests on paper and fax them to the instructor.

Demographic Problems

Another problem unique to rural areas, even at the end of the twentieth century, was the sparse electrical supply. The room reserved by school administrators for the project was satisfactory in every way but one: it had no power outlet. The obvious solution was obtaining an extension cord to convey power from another room. However, computers require a plug with three prongs to ensure grounding. Such a cord was unavailable. The local police force joined in the search, then suggested a workable alternative.

Unfortunately, the investigators took familiarity with technology for granted. Our enthusiastic and creative trainee required several hours of practice to acquire the upper extremity coordination to work with a mouse. The concepts of "e-mail" or "white boarding" as a communicative modalities were somewhat threatening, and she never utilized those aspects during the pilot.

SUGGESTIONS FOR FUTURE PROJECTS

The Internet training concept was successful in the present project. Not only was the training program delivered, and a paraprofessional placed in the Cibecue school, but the pilot

revealed several ways for further concept development. These optimization methods include optimal utilization of personnel and back-up procedures for infrastructure failure.

Part of the success of this project was due to the presence of personnel on-site who had knowledge of the limitations of community infrastructure and who had interest in current computer technology. Development of future training sites will include identification of such personnel.

Community infrastructure problems involved the basic needs for computer Internet use: electricity and telephone service. Program developers may not have the luxury of taking such service for granted, even at the end of the twentieth century. We were fortunate that local individuals, including our able trainee, saw value on our project, and came forward to help. These individuals solved problems unique to their location. Indeed, we discovered that, in the present project, the feeling that the community was developing its training program for its schools, with help but not intrusion from outside sources, was a major positive factor in the program's success.

Finally, on a purely pragmatic level, program developers discovered the need to specify electric and telephone services availability. Most energy and development went to preparing computer hardware and software support, with little attention to the elemental factors that underlie the technology.

References

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